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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,265	03/31/2004	Roger C. Jeppsen	35480.P18990	7477

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Grossman, Tucker, Perreault & Pfleger, PLLC
c/o PortfolioIP
P.O. Box 52050
Minneapolis, MN 55402

EXAMINER

SCHLIE, PAUL W

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/815,265	Applicant(s) JEPPSEN ET AL.	
	Examiner Paul W. Schlie	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-19 have been examined as amended 8/14/06.

Response to Arguments

2. Applicant's arguments filed 8/14/06 have been fully considered but they are not persuasive. As per the applicant's argument that the SAS standard does not provide for the SCSI extended copy command, as evidenced by the published T10 standards documents (T10/1262-D Revision 5, and T10/02-246r1 as cited in the attached PTO-892 References cited), it is clear that the SAS standard provides for the support of the SCSI command set inclusive of the support of the "extended copy" command and corresponding semantics; and as Tyndall is considered to teach a system and/or corresponding methods by which a copy command may be executed on behalf of a requesting host within a router (or analogous equivalent within the topology) utilizing a standardized physical communications protocol layer specifically targeted to support the interconnection of a potential plurality of hosts, routers/extenders and storage units (as analogously specified by the SAS published standard prior to the applicant's claimed invention, and thereby considered known by those of ordinary skill in the art, and thereby neither patentably distinguishable from it), the rejection of claims 1-19 as amended is maintained and/or moot in view of their rejection as necessitated by their amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tyndall (US 2002/0156942) in view of the published Serial Attached SCSI (SAS) standard (T10/1562-D).

As per independent claims 1, 6, 11 and 16, Tyndall teaches a system and/or methods comprising a storage system router (i.e. expander) which may be remotely interconnected with a potential plurality of hosts and storage devices utilizing a potential plurality of communication protocols to enable said storage system router to remotely manage the evaluation of storage commands on behalf of said host inclusive of all functions inherently associated with that required to remotely copy data from a first storage device to a second storage device comprising said potential plurality of storage devices, where said storage system router is considered to inherently comprise that functionality attributed to a "copy manager" by the applicant (see paragraph [0003] [0117] and figures 2-3); but does not teach explicitly that said storage system router may comprise an integrated circuit predominantly enabling and/or implementing the same, or that standardized Serial Attached SCSI (SAS) interconnect and corresponding protocols may be utilized. However as it is well understood by those of ordinary skill in the art at the time of the claimed invention that increasing complex systems may be embodied wholly within an integrated circuit, and correspondingly well known that the Serial Attached SCSI (SAS) standard analogously implicitly teaches the same, it is considered obvious that such a storage system router/extender may support the SAS

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standard and thereby extended copy command protocols and semantics may be predominantly embodied within an integrated circuit for the benefit of potentially reducing the power consumption, form-factor, and/or cost of such a system, and inherently embody the functionality associated with that required to evaluate an extended copy command received from said host consistently with the semantics specified by the standard.

As per claims 2-5, 7-10, 12-15 and 17-19, being dependent on claims 1, 6, 11, 16, or correspondingly dependent claim inclusively, as claims (2-5) are considered to effectively claim that taught by the published SAS standard and/or implicitly understood analogous virtual storage device (such as a RAID storage subsystem, which may be viewed itself as a system comprising a storage system router as taught by Tyndall interconnected with a potential plurality of hosts and storage devices), it is considered obvious to one of ordinary skill in the art at the time of the claimed invention that said storage system router (i.e. extender) may be interconnected with any type of storage device inclusive of and/or embodied within a virtual storage device and be enabled to satisfy the protocol requirements as established by their correspond implementation standards, the claims stand rejected; as are claims (7-10, 12-15, 17-19), being considered encompassed by claims (2-5) in other form and thereby correspondingly rejected by the same arguments as presented above.

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Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W. Schlie whose telephone number is 571-272-6765. The examiner can normally be reached on Mon-Thu 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 517-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PIERRE BATAILLE
PRIMARY EXAMINER

10/05/06